LONG SLIT SPECTROSCOPY OF NGC 5506

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ABSTRACT

The galaxy NGC5506 hosts an active nucleus, that presents characteristics that are intermediate between Sy1 and Sy2.

We discuss long slit spectra of NGC 5506 in the ranges 4675-5475 A and 6300-7125 A, that were obtained at three different position angles, in April 1991 at the WHT 4.2 m telescope on the island of La Palma.

The peculiar kinematics of the emitting gas has already been observed by Wilson et al. (1985); following the model proposed by Wilson et al., that the emitting gas is located in two cones, we determined the aperture of the cones. Our data, moreover, support the hypothesis that the gas is receeding from the nucleus.

We modelled the intensity and the ratios of the emission lines, and verified that the active nucleus of NGC 5506 can be described as a Sy1 nucleus, with the UV-X source that is partially obscured to our line of sight. On the contrary, a good fraction of the interstellar gas of the galaxy is directly illuminated and photoionized by the central source.

Our data also show evidence of star formation close to the nucleus; we estimated the star formation rate, that is high with respect to "normal" spirals, but not high enough to be comparable to star formation rates in a starburst galaxy.